## **ABSTRACT**

A method of image compression includes significance switching of DCT coefficients in block-based embedded DCT procedures. Bitwise digitized DCT coefficients are passed through successive significance sweeps of the whole image from the most significant down to the least significant coefficient bit planes. With each new sweep, newly significant coefficients may appear within a block, and block-masking is used to transmit the addresses of those newly significant coefficients. An off-mask may also be used. The invention further relates to a hardware or software-based image encoder.